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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,116	01/30/2002	Hung-Kun Chen	46914-2004	9988
24504	7590	05/03/2005	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			KUMAR, PANKAJ	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/062,116

Applicant(s)

CHEN, HUNG-KUN

Examiner

Pankaj Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-25 is/are allowed.
- 6) ☒ Claim(s) 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because:
 - a. It should not contain the title of the invention
 - b. Line 7 "sate" is misspelled and should probably be 'state'
2. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claim 26 is objected to because of the following informalities: its recitation of "i.e." is unclear as to whether the limitations after the recitation are part of the claim limitations. Hence, "i.e." and other similar language (like 'for example') should not be included in the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brardjanian USPN 6,567,480 in view of Hattori USPN 5,825,756. Here is how the references teach the claim:

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6. As per claim 26: (b. 1) deriving a continuous-time received signal (Brardjanian 6567480 fig. 2: analog input into 106 is continuous in time) from said plurality of parameters (Brardjanian 6567480 fig. 2: parameters for any combination of 120, 118, 110, 114, 112, 116, 108);
7. (b. 2) taking samples at a predetermined rate, thereby, obtaining a discrete received sample sequence (Brardjanian 6567480 fig. 2: 106 has discrete digital samples being output from the A/D);
8. (b.3) defining a state to be a predetermined number of data symbols (Brardjanian 6567480 col. 9: state of r is defined by one i) of said plurality of data symbols (Brardjanian 6567480 col. 9: many i 's make up the data symbols);
9. (b.4) for any two identical states (not in Brardjanian but would be obvious as explained below) in said receiving sample sequence (Brardjanian 6567480 fig. 2: 106 has discrete digital samples being output from the A/D), performing a differential operation, i.e., complex-multiplying one receiving sample with another receiving sample having the same state (Brardjanian fig. 3: 402, 403, r , r^*) and defining a new variable of a multiplied value for the result (Brardjanian fig. 3: 403, 404, z , z'); and (b. 5) taking phase of said multiplied value so to find said frequency offset estimation (Brardjanian fig. 3: 403, 405: differential phase; col. 1 lines 10-11: frequency offset estimation).
10. Brardjanian teaches receiving sample sequence but does not teach two identical states in the receiving sample sequence. Hattori 5,825,756 teaches in figs. 1 and 2 of filtering digital data at a center frequency and thus the states are identical since the different data are at the same center frequency. Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the two identical states in the receiving sample sequence as

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indicated by the instant claims, because the combined teaching of Brardjanian with Hattori suggest two identical states in the receiving sample sequence as indicated by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Brardjanian with Hattori because Brardjanian suggests receiving sample sequence (something broad) in general and Hattori suggests the beneficial use of two identical states in the receiving sample sequence (such as receiving data from the same frequency to reduce interference from other channels) in the analogous art of communication.

11. The recitation in the preamble is not given patentable weight since the recitation recites the intended use of a structure and the body of claim does not depend on the preamble for completeness and the bodily limitations are able to stand alone.

Allowable Subject Matter

12. Claims 1-25 are allowed.

13. The following is a statement of reasons for the indication of allowable subject matter:
The art of record does not suggest the respective claim combinations together and nor would the respective claim combinations be obvious with:

14. As per claim 1 and its dependent claims: part f of claim 1

15. As per claim 18 and its dependent claims: weighted average section

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Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (571) 272-3011. The examiner can normally be reached on Mon, Tues, Thurs and Fri after 8AM to after 6:30PM.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pankaj Kumar
Patent Examiner
Art Unit 2631

PK